

REMARKS

This Amendment is fully responsive to the final Office Action dated June 9, 2010, issued in connection with the above-identified application. Claims 1-10 and 12-14 are pending in the present application. With this Amendment, claims 1, 13 and 14 have been amended. No new matter has been introduced by the amendments made to the claims. Favorable reconsideration is respectfully requested.

I. Interview Summary

The Applicants thank Examiner Abbaszadeh for granting the telephone interview (hereafter “interview”) with the Applicants’ representative, which was conducted on August 31, 2010.

During the interview, the distinguishable features between the present invention (as recited in independent claim 1, as amended) and the cited prior art were discussed in detail. It was noted that the present invention is directed to a communication device that includes a memory which stores information required to create an alive packet which is transmitted periodically at a predetermined time and which indicates that the communication device is in a state of being able to provide the service, wherein the required information includes address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit.

Additionally, it was noted that an alive packet transmitting unit is operable to (i) read out, from the memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit the created alive packet.

Thus, even in a state where the power of a main processing unit is in an off state, the alive packet can be created by a communication processing unit. As a result, it is possible for the communication device to notify a client that the communication device can provide a service to another communication device by using the alive packet.

Conversely, it was noted that Powers and Killian fail to disclose or suggest storing, in a memory, information required to create an alive packet which is transmitted periodically at a predetermined time, wherein the required information includes address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit.

Additionally, it was noted that Powers and Killian fail to disclose or suggest transmitting the alive packet indicating that the communication device can provide the service in a state where the power is not being supplied to the main processing unit (i.e., in a state where the main processing unit cannot provide the service directly to another communication device).

During the interview, additional claim amendments were also discussed. It was agreed that the independent claims could be further amended to clarify that “even in a state where the power of a main processing unit is in an off state, the alive packet can be created and transmitted by a communication processing unit.” The Examiner indicated that such an amendment would help to distinguish the present invention from the cited prior art. However, the Examiner also indicated that further search and consideration would be necessary before making a final determination regarding the allowability of the claims.

II. Prior Art Rejections

In the Office Action, claims 1-10 and 12-14 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Powers et al. (U.S. 7,424,632, hereafter “Powers”) in view of Killian (U.S. Patent No. 7,574,525, hereafter “Killian”).

The Applicants have amended independent claims 1, 13 and 14 to more clearly distinguish the present invention from the cited prior art. The Amendments to independent claims 1, 13 and 14 are consistent with the claim amendments proposed during the interview conducted on August 31, 2010 (hereafter “interview”). For example, independent claim 1 (as amended) recites *inter alia* the following features:

“[a] communication device for communicating via a network to provide a service to another communication device on the network, the communication device comprising:...

a memory operable to store information required to create an alive packet which is transmitted periodically at a predetermined time and which indicates that the communication device is in a state of being able to provide the service, the required information including address information of the communication device, identification information of the communication device, and service information for the service provided by said main processing unit;

an alive packet transmitting unit operable to (i) read out, from said memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit

the created alive packet...

wherein said alive packet transmitting unit creates and transmits the alive packet while said main processing unit is in a condition of not yet having power to provide a main service.”
(Emphasis added).

The features emphasized above in independent claim 1 are similarly recited in independent claims 13 and 14 (as amended). That is, independent claim 14 is a semiconductor device having a communication device with the same features emphasized above in independent claim 1; and independent claim 13 is a communication method having steps directed to the features emphasized above in independent claim 1. Additionally, the features emphasized above in independent claim 1 (and similarly recited in independent claims 13 and 14) are fully supported by the Applicants’ disclosure (see e.g., ¶ [0052]- ¶ [0055]; ¶ [0072]; Fig. 4; and corresponding description of Fig. 4).

The present invention (as recited in independent claim 1 and similarly recited in independent claims 13 and 14) is distinguishable from the cited prior art in that a communication device includes a memory which stores information required to create an alive packet which is transmitted periodically at a predetermined time, wherein the required information includes address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit.

Additionally, an alive packet transmitting unit is operable to (i) read out, from the memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit the created alive packet. The alive packet transmitting unit creates and transmits the alive packet while the main processing unit is in a condition of not yet having power to provide a main service.

Thus, even in a state where the power of a main processing unit is in an off state, the alive packet can be created and transmitted by the communication processing unit. As a result, it is possible for the communication device to notify a client that the communication device can provide a service to another communication device by using the alive packet.

In the Office Action, the Examiner relies on the combination of Powers and Killian for disclosing or suggesting all the features recited in independent claims 1, 13 and 14. However,

the Applicants assert that Powers and Killian fail to disclose or suggest the features now recited in independent claims 1, 13, 14, as amended.

As proposed during the interview, independent claims 1, 13 and 14 have been amended to include the following:

a memory that stores information required to create an alive packet which is transmitted periodically at a predetermined time and which indicates that the communication device is in a state of being able to provide the service, the required information including address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit.

In the Office Action, the Examiner relies on Powers at col. 7, lines 28-31 for disclosing or suggesting the features of the claimed alive packet transmitting unit (or step) of the present invention (as recited in independent claims 1, 13 and 14).

Powers at col. 7, lines 28-36 merely discloses that a coprocessor 250 can respond to an incoming signal by broadcasting a message that includes the IP address of a computer 210. As described in Powers, the coprocessor 250 can initiate dialogue with the owner of the incoming signal, for example, to obtain further information and/or clarify the information received.

As acknowledged by the Examiner, Powers fails to disclose or suggest that an alive packet is transmitted periodically at a predetermined time (see e.g., Office Action, pg. 2). Thus, it logically follows that Powers at col. 7, lines 28-36 also fails to disclose or suggest *a memory that stores information required to create an alive packet which is transmitted periodically at a predetermined time*, as recited in independent claims 1, 13 and 14.

Independent claims 1, 13 and 14 have also been amended to include:

an alive packet transmitting unit operable to (i) read out, from said memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit the created alive packet...wherein the alive packet transmitting unit creates and transmits the alive packet while said main processing unit is in a condition of not yet having power to provide a main service.

As noted above, Powers fails to disclose or suggest a memory that stores information required to create an alive packet which is transmitted periodically at a predetermined time.

Accordingly, Powers cannot disclose or suggest *an alive packet transmitting unit operable to (i) read out, from the memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit the created alive packet*, as recited in independent claims 1, 13 and 14.

Also, nothing in Powers discloses or suggests that *the alive packet transmitting unit creates and transmits the alive packet while the main processing unit is in a condition of not yet having power to provide a main service*, as recited in independent claims 1, 13 and 14.

Independent claims 1, 13 and 14 (as amended) are clearly distinguished from Powers. Moreover, based on a detailed review of Killian, the reference fails to overcome the deficiencies noted above in Powers.

In the Office Action, the Examiner relies on col. 4, lines 6-9, lines 38-45 and lines 54-55 of Killian for also disclosing or suggesting the features of the claimed alive packet transmitting unit (or step) of the present invention (as recited in independent claims 1, 13 and 14).

Killian in col. 4, lines 6-9 discloses a message server 220 that performs data exchange operations between Java-based server nodes by maintaining a list of services (e.g., processes and tasks) performed by the server nodes. As described in Killian, the server 220 includes a first repository 302 that maintains the list of services performed by the server nodes.

Killian, in col. 4, lines 38-45 discloses that the message server 202 receives status information regarding all the server nodes and uses the status information to update the information in its repositories (e.g., 302). The server nodes periodically send a packet to the server 220 indicating its status (i.e., running, stopped, etc.) as well as information regarding access points and port addresses. Additionally, Killian in col. 4, lines 54-55 discloses that the message server 220 provides notifications regarding the status of all the services performed by the server nodes.

As noted during the interview, independent claims 1, 13 and 14 include:

a memory that stores information required to create an alive packet...wherein the required information including address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit.

Conversely, Killian merely discloses that the server 220 includes a first repository 302 that maintains the list of services performed by the server nodes. Thus, the server 220 does not include information for the creation of an alive packet, let alone information including address information of the communication device, identification information of the communication device, and service information for the service provided by the main processing unit, as recited in independent claims 1, 13 and 14.

Additionally, independent claims 1, 13 and 14 recites that an alive packet transmitting unit is operable to *(i) read out, from the memory, at least the address information of the communication device and the service information, (ii) create the alive packet including the read out address information and service information, and (iii) transmit the created alive packet, wherein the alive packet transmitting unit creates and transmits the alive packet while the main processing unit is in a condition of not yet having power to provide a main service.*

On the other hand, Killian discloses that the message server 202 receives status information about all the server nodes and uses the status information to update the information in its repositories (e.g., 302). Additionally, the message server 202 provides notifications regarding the status of all the services performed by the server nodes.

Nothing in Killian discloses or suggests creating and transmitting an alive packet, let alone creating and transmitting the alive packet while the main processing unit is in a condition of not yet having power to provide a main service, as recited in independent claims 1, 13 and 14.

Based on the above discussion, no combination of Powers and Killian would result in, or otherwise render obvious, independent claims 1, 13 and 14 (as amended). Additionally, no combination of Powers and Killian would result in, or otherwise render obvious, claims 2-10 and 12 at least by virtue of their dependencies from independent claim 1.

III. Conclusion

In light of the above, the Applicants submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass this application to issue.

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